SIMCOUPLER MODULE

PSIM

Making best use of PSIM and Matlab/Simulink®

The SimCoupler Module provides the link for co-simulation between PSIM and Matlab/Simulink. With the link, part of a system can be implemented in PSIM, and the rest of the system in Matlab/Simulink.

The SimCoupler Module allows Matlab/Simulink users to make full use of PSIM's capability in power electronics and motor drive simulation, and to reuse legacy models that one already built in Simulink.

At the same time, the SimCoupler Module gives power electronics researchers and engineers the option to simulate control in the Matlab/Simulink environment, and it further enhances PSIM's control simulation capability by providing access to various Simulink toolboxes.

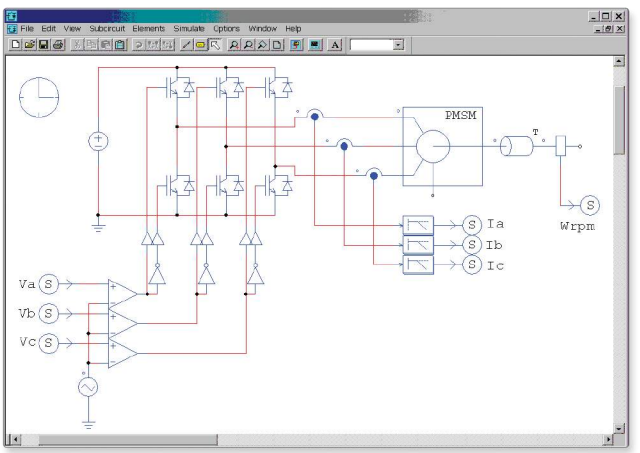
Setup of the co-simulation with SimCoupler is easy and straightforward, with minimum user input.

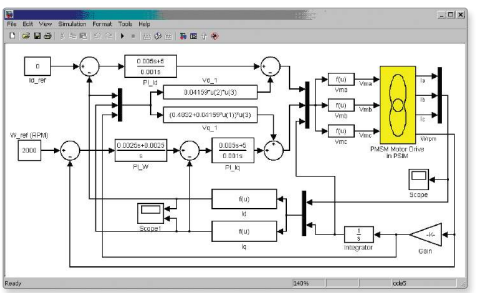
The example below shows a PMSM drive system with the power converter and motor in PSIM and control in Simulink. In PSIM, three motor currents and the speed are measured and passed to Simulink. In return, three modulation signals in Simulink are sent back to PSIM.

With SimCoupler, one can take full advantage of PSIM's power simulation capability and Matlab/Simulink's control simulation capability in a complementary way.

FEATURES & BENEFITS

- Easy to set up co-simulation with minimum user input
- Waveform display in both PSIM and Simulink
- Best use of both software in a complementary way





Above: **Control** of a PMSM drive system implemented in Simulink.

Left: **Power stage** of a PMSM drive system implemented in PSIM.